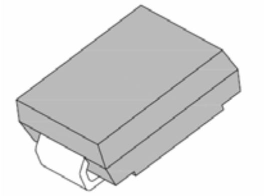
1500W Surface Mount Transient Voltage Suppressor



SMC

Features

- Low inductance, excellent clamping capability
- Repetition rate(duty cycle): 0.05%
- Fast response time: typically less than 1.0ps from 0V to BV min.
- Typical I_R less than 1 μA above 10V
- High temperature soldering guaranteed 250°C/10 seconds at terminals
- This series is UL recognized under component index. File number E315008
- RoHS Compliant

Mechanical Data

Case:	JEDEC DO-214AB (SMC) molded plastic over glass passivated junction
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denoted positive end (cathode) except Bi-directional
Mounting position:	Any
Weight:	0.007 Ounce, 0.21 gram

Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	Value	Unit	Conditions
P_{PPM}	Peak Pulse Power Dissipation on 10/1000μs Waveform	Minimum 1500	W	Non-repetitive current pulse, per FIG.3 and derated above T_A=25° C per FIG.2
I_{PPM}	Peak Pulse Current on 10/1000μs Waveform	See Table	A	Non-repetitive current pulse
I_{FSM}	Peak Forward Surge Current	200	A	8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note 1,2)
T_J,T_{STG}	Operating Junction and Storage Temperature Range	-55 to 150	° C	

Note: **1.** Mounted on 8.0mm x 8.0mm copper pads to each terminal
2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle= 4 pulses per minutes maximum.

Electrical Characteristics *(T $_{Ambient}$=25ºC unless noted otherwise)*

Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ I_{PPM}	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V_{WM}
					V_{BR}					
Uni-Polar	Bi-Polar	Uni	Bi	V_{WM} (V)	Min.	Max.	I_T(mA)	V_C (V)	I_{PPM} (A)	I_D (µA)
1.5SMC6.8A	1.5SMC6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	144.8	1000/2000
1.5SMC7.5A	1.5SMC7.5CA	7V5A	7V5C	6.4	7.13	7.88		11.3	134.5	500/1000
1.5SMC8.2A	1.5SMC8.2CA	8V2A	8V2C	7.02	7.79	8.61		12.1	125.6	200/400
1.5SMC9.1A	1.5SMC9.1CA	9V1A	9V1C	7.78	8.65	9.55	1	13.4	113.4	50/100
1.5SMC10A	1.5SMC10CA	10A	10C	8.55	9.5	10.5	1	14.5	104.8	10/20
1.5SMC11A	1.5SMC11CA	11A	11C	9.4	10.5	11.6	1	15.6	97.4	5/10
1.5SMC12A	1.5SMC12CA	12A	12C	10.2	11.4	12.6	1	16.7	91.0	5/10
1.5SMC13A	1.5SMC13CA	13A	13C	11.1	12.4	13.7	1	18.2	83.5	1
1.5SMC15A	1.5SMC15CA	15A	15C	12.8	14.3	15.8	1	21.2	71.7	1
1.5SMC16A	1.5SMC16CA	16A	16C	13.6	15.2	16.8	1	22.5	67.6	1
1.5SMC18A	1.5SMC18CA	18A	18C	15.3	17.1	18.9	1	25.2	60.3	1
1.5SMC20A	1.5SMC20CA	20A	20C	17.1	19	21	1	27.7	54.9	1
1.5SMC22A	1.5SMC22CA	22A	22C	18.8	20.9	23.1	1	30.6	49.7	1
1.5SMC24A	1.5SMC24CA	24A	24C	20.5	22.8	25.2	1	33.2	45.8	1
1.5SMC27A	1.5SMC27CA	27A	27C	23.1	25.7	28.4	1	37.5	40.5	1
1.5SMC30A	1.5SMC30CA	30A	30C	25.6	28.5	31.5	1	41.4	36.7	1
1.5SMC33A	1.5SMC33CA	33A	33C	28.2	31.4	34.7	1	45.7	33.3	1
1.5SMC36A	1.5SMC36CA	36A	36C	30.8	34.2	37.8	1	49.9	30.5	1
1.5SMC39A	1.5SMC39CA	39A	39C	33.3	37.1	41	1	53.9	28.2	1
1.5SMC43A	1.5SMC43CA	43A	43C	36.8	40.9	45.2	1	59.3	25.6	1
1.5SMC47A	1.5SMC47CA	47A	47C	40.2	44.7	49.4	1	64.8	23.5	1
1.5SMC51A	1.5SMC51CA	51A	51C	43.6	48.5	53.6	1	70.1	21.7	1
1.5SMC56A	1.5SMC56CA	56A	56C	47.8	53.2	58.8	1	77	19.7	1
1.5SMC62A	1.5SMC62CA	62A	62C	53	58.9	65.1	1	85	17.9	1
1.5SMC68A	1.5SMC68CA	68A	68C	58.1	64.6	71.4	1	92	16.5	1
1.5SMC75A	1.5SMC75CA	75A	75C	64.1	71.3	78.8	1	103	14.8	1
1.5SMC82A	1.5SMC82CA	82A	82C	70.1	77.9	86.1	1	113	13.5	1
1.5SMC91A	1.5SMC91CA	91A	91C	77.8	86.5	95.5	1	125	12.2	1
1.5SMC100A	1.5SMC100CA	100A	100C	85.5	95	105	1	137	11.1	1
1.5SMC110A	1.5SMC110CA	110A	110C	94	105	116	1	152	10.0	1
1.5SMC120A	1.5SMC120CA	120A	120C	102	114	126	1	165	9.2	1
1.5SMC130A	1.5SMC130CA	130A	130C	111	124	137	1	179	8.5	1

Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ IPPM	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V WM
					V BR					
Uni-Polar	Bi-Polar	Uni	Bi	V WM (V)	Min.	Max.	IT(mA)	VC (V)	IPPM (A)	ID (µA)
1.5SMC150A	1.5SMC150CA	150A	150C	128	143	158	1	207	7.3	1
1.5SMC160A	1.5SMC160CA	160A	160C	136	152	168	1	219	6.9	1
1.5SMC170A	1.5SMC170CA	170A	170C	145	162	179	1	234	6.5	1
1.5SMC180A	1.5SMC180CA	180A	180C	154	171	189	1	246	6.2	1
1.5SMC200A	1.5SMC200CA	200A	200C	171	190	210	1	274	5.5	1
1.5SMC220A	1.5SMC220CA	220A	220C	185	209	231	1	328	4.6	1
1.5SMC250A	1.5SMC250CA	250A	250C	214	237	263	1	344	4.4	1

Note: For bi-directional type having VWM of 10V and less, the ID limit is double.

Typical Characteristics Curves

Fig.1- Peak Pulse Power Rating Curve

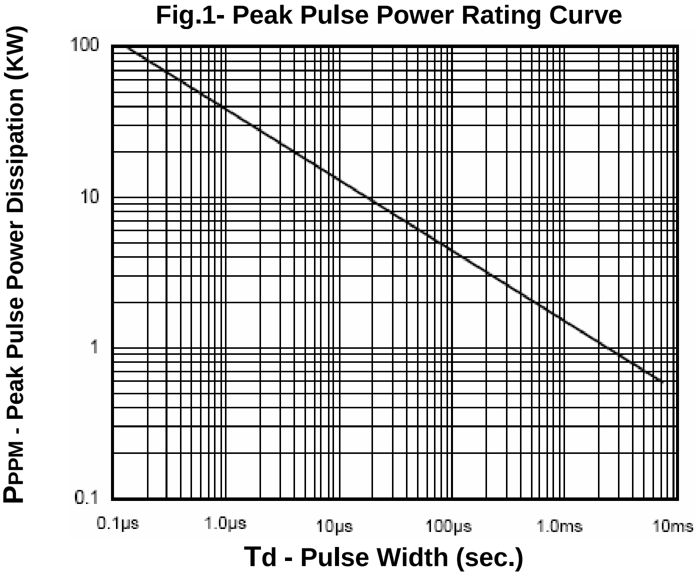


Fig.2- Pulse Derating Curve

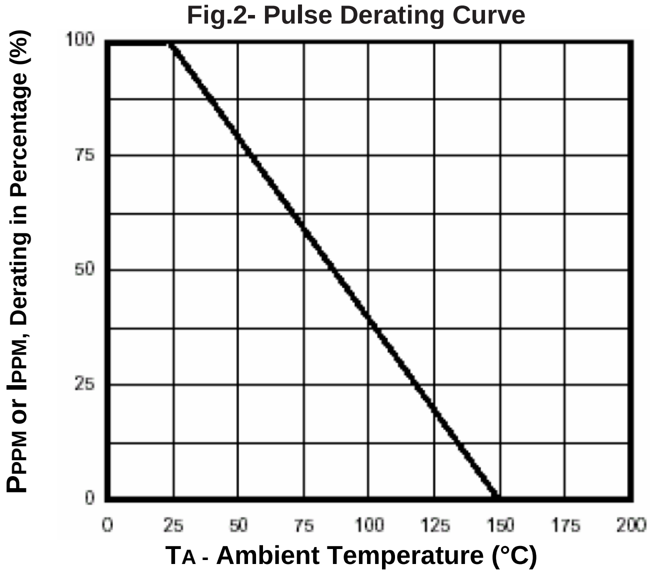


Fig.3- Pulse Waveform

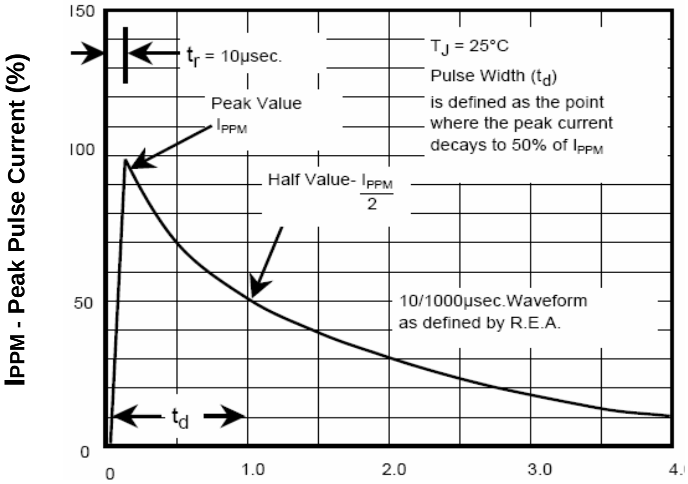


Fig.4 - Max. Non-Repetitive Forward Surge Current Uni-Directional Only

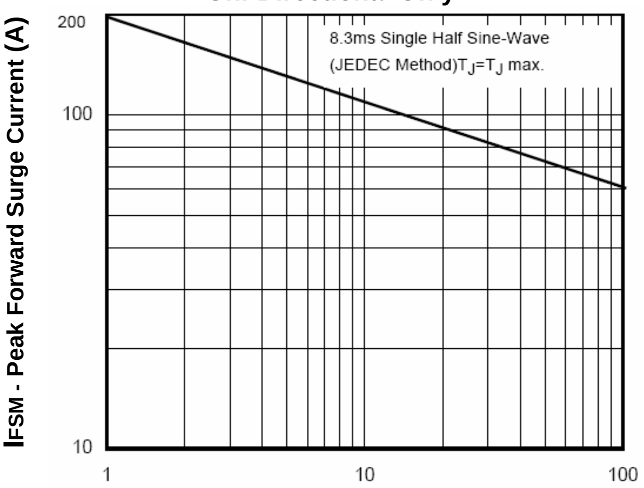
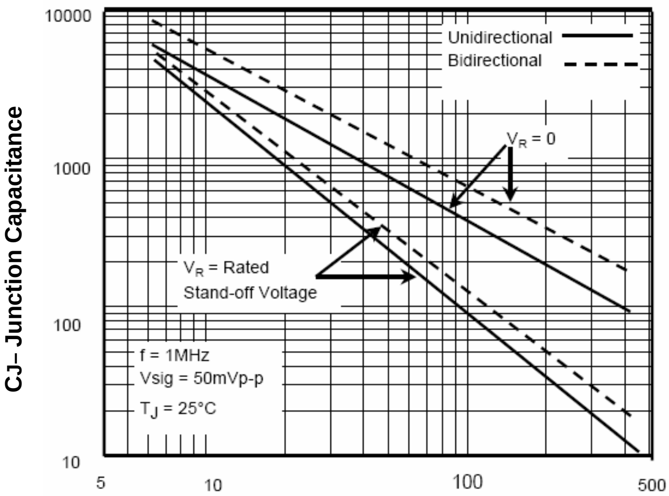
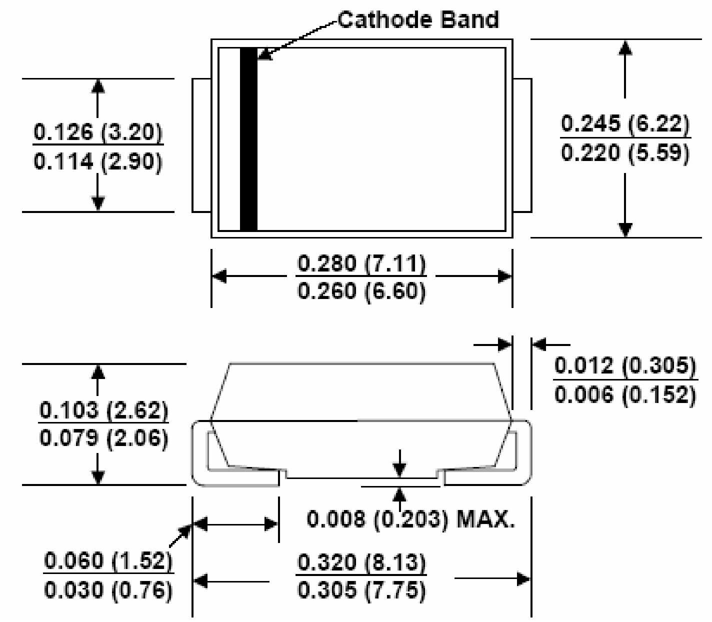


Fig.5- Typical Junction Capacitance



Dimensions in inches (mm)



SMC

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